State of Alaska FY2009 Governor's Operating Budget

Department of Environmental Conservation Water Results Delivery Unit Budget Summary

Water Results Delivery Unit

Contribution to Department's Mission

Protect water quality and assist communities in improving sanitation conditions.

Core Services

- Improve water quality conditions where they are below public health or environmental standards.
- Issue wastewater discharge permits to facilities and operations that release potentially harmful pollutants.
- Ensure facility compliance with permit conditions.
- Provide community assistance for the protection of water quality.
- Develop user friendly public access to water quality data.
- Provide grants, loans and engineering assistance for drinking water, sewerage, and solid waste facilities.
- Provide training programs for and certification of water and sewerage system operators.
- Provide over-the-shoulder and emergency assistance to system operators in remote communities.

End Result	Strategies to Achieve End Result
A: Water quality is protected.	A1: Establish protective standards for water quality.
Target #1: No polluted waters. Measure #1: Number of polluted waters.	Target #1: Protective standards are established for Water Quality are complete by June 30, 2007. Measure #1: % of revisions to targeted standards for Water Quality are complete by June 30, 2007.
	A2: Assume control from the EPA of National Pollutant Discharge Elimination System (NPDES) as established in the Clean Water Act.
	Target #1: 100% of EPA information requests are responded to within agreed upon timeframes. Measure #1: % of EPA information requests are submitted on time.
	A3: Restore polluted waterbodies to their designated uses.
	<u>Target #1:</u> Two waterbody recovery plans per year. <u>Measure #1:</u> Number of polluted waterbody recovery plans completed during the year.
	<u>Target #2:</u> Ten active restoration projects per year. <u>Measure #2:</u> Number of active restoration projects during the year.
	A4: Issue discharge permits/authorizations.
	Target #1: 100% of known dischargers have current permits/authorizations. Measure #1: % of known dischargers have current permits/authorizations.

	A5: Enforce compliance with permit/authorization conditions. Target #1: Dischargers requiring permits are compliant with permit/authorization terms and conditions. Measure #1: % of permit holders requiring enforcement actions.
End Result	Strategies to Achieve End Result
B: Citizens are protected from unsafe sanitation facilities. Target #1: 100% serviceable rural Alaska homes are served by safe and sustainable sanitation facilities. Measure #1: % of serviceable rural Alaska homes served by safe and sustainable sanitation facilities.	B1: Allocate funding based on health related needs. Target #1: 2.5% annual reduction in rural sanitation deficiencies that are health related. Measure #1: % reduction of rural sanitation deficiencies that are health related. B2: Increase operator certification compliance. Target #1: 2% annual increase in the number of rural sanitation systems which comply with water treatment operator certification requirements. Measure #1: % annual increase in the number of rural sanitation systems which comply with water treatment operator certification requirements.

Major Activities to Advance Strategies

- Identify Best Management Practices (BMP's) addressing all types of non-point source pollution.
- Ensure water quality standards to protect all uses of Alaska's fresh and marine waters.
- Monitor water quality and report on the health of Alaska's waters.
- Enforce the State's wastewater discharge standards through the review of cruise vessel monitoring reports and conduct independent DEC sampling.
- Conduct inspections and follow up with facility operators to correct noncompliance or take enforcement actions.
- Administer grants and loans.
- Provide engineering and technical assistance to communities.
- Train water and wastewater facility operators.

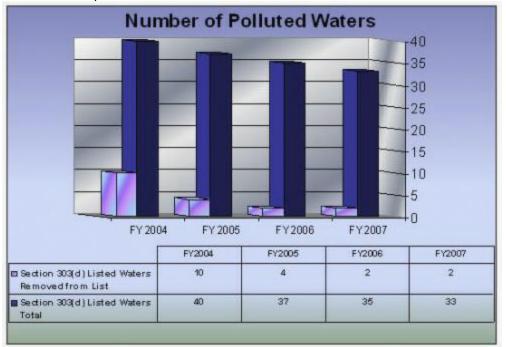
FY2009 Resources Allocated to Achieve Results						
Personnel: Full time	120					
Part time	0					
Total	120					
	Personnel: Full time Part time					

Performance Measure Detail

A: Result - Water quality is protected.

Target #1: No polluted waters.

Measure #1: Number of polluted waters.



Analysis of results and challenges: Water Quality Standards, found in 18 AAC 70, designate specific uses for which water quality must be protected (e.g., drinking water, aquatic life) and specifies the pollutant limits, or criteria necessary to protect designated uses. There are seven designated uses for freshwater and seven for marine waters. By default, waterbodies in Alaska are protected for all designated uses. The few waterbodies that have had some uses removed are listed in the water quality standards.

The Department of Environmental Conservation (DEC) uses Water Quality Standards as the criteria to determine if a waterbody is polluted. For example, if waterbody monitoring data consistently shows high concentrations of a substance that is not suitable for aquatic life then that waterbody is considered polluted (or impaired) for that designated use. Alaska formally reports the status and trends of its waters every two years in the Integrated Water Quality Monitoring and Assessment Report. The report includes information on the general health of Alaska's waters, DEC water protection programs and a list of impaired waterbodies, and how the impairment is being addressed or proposed to be addressed. Waterbodies are placed in one of five categories based upon known information. The report meets Alaska's responsibilities under Section 303(d) of the Clean Water Act to identify polluted waters.

As of the end of FY2007, there are 33 waterbodies listed in Category 5 - Impaired and Requiring a Total Maximum Daily Load (TMDL), which is essentially a waterbody corrective action plan. The waterbodies are scheduled for development of a TMDL over a seven-year period. Once a TMDL has been developed, an impaired water is moved into Category 4, which lists those waters which are impaired but for which a TMDL or other recovery plan is in place. In FY2007, 2 TMDLs were completed.

A1: Strategy - Establish protective standards for water quality.

Target #1: Protective standards are established for Water Quality are complete by June 30, 2007. **Measure #1:** % of revisions to targeted standards for Water Quality are complete by June 30, 2007.



Analysis of results and challenges: The federal Clean Water Act requires DEC to review and update the Alaska Water Quality Standards every three years. These standards describe the chemical, physical and biological condition of state waters (e.g. coastal marine waters, lakes, rivers) necessary to protect human health and the aquatic life living in and using the water. Water Quality Standards are used to determine wastewater permit discharge requirements, to assess whether waterbodies are polluted, and to set cleanup goals for polluted waterbody recovery plans. DEC uses both national and Alaska-specific scientific studies and regulatory policies to ensure the Water Quality Standards are relevant to Alaska's conditions and needs.

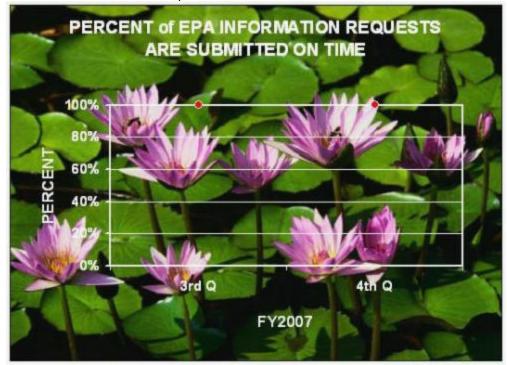
DEC has completed adoption of revised standards for mixing zones, residues, dissolved oxygen, analytical testing methods, and natural conditions. DEC is facilitating the U.S. Environmental Protection Agency review and approval of the new state Water Quality Standards, as required by the Clean Water Act. At EPA's request, DEC is developing procedures explaining how the new regulations will be implemented in NPDES wastewater discharge permits. DEC is also consulting with federal agencies on Essential Fish Habitat and the Endangered Species Act review of the new standards.

In FY2007, DEC completed the Water Quality Standards review by proposing a new procedure for implementing natural condition-based standards for those waters where water quality is naturally lower than the default statewide standard. DEC assessed options for further revisions to Water Quality Standards and developed a new 3-year workplan.

Further information on the Water Quality Standards may be found at: http://www.state.ak.us/dec/water/wqsar/trireview/trireview.htm.

A2: Strategy - Assume control from the EPA of National Pollutant Discharge Elimination System (NPDES) as established in the Clean Water Act.

Target #1: 100% of EPA information requests are responded to within agreed upon timeframes. **Measure #1:** % of EPA information requests are submitted on time.



Analysis of results and challenges: On August 27, 2005 the Governor signed SB110, which directs DEC to seek and assume primacy for the National Pollutant Discharge Elimination System (NPDES) wastewater permit and compliance program. DEC submitted an application to EPA for their approval on the legislatively mandated deadline of June 30, 2006.

EPA will submit a list of comments on the application. DEC will respond to information requests and supplement gaps in the application within agreed upon timeframes. This process will continue until primacy for the NPDES wastewater permit program is approved.

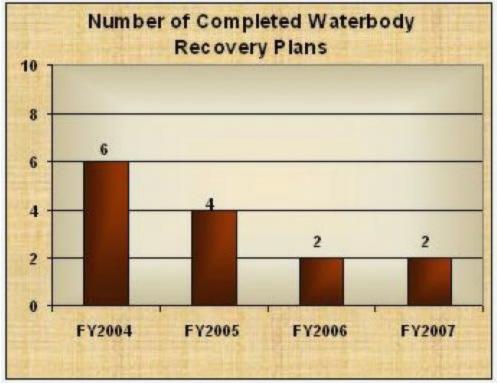
This was a new measure and no data was available until the third quarter of FY2007. During the third and fourth quarter of FY2007, DEC achieved 100% response to all EPA requests within the agreed timeframe.

More information on the state effort to gain control over the National Pollutant Discharge Elimination System program can be found at: http://www.dec.state.ak.us/water/npdes/npdes.htm

A3: Strategy - Restore polluted waterbodies to their designated uses.

Target #1: Two waterbody recovery plans per year.

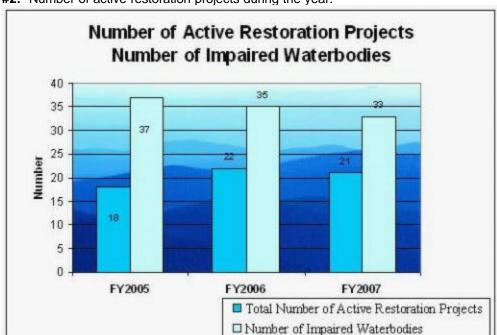
Measure #1: Number of polluted waterbody recovery plans completed during the year.



Analysis of results and challenges: When waterbodies are determined to be impaired (when they exceed Water Quality Standards for a particular pollutant), they are added to the Clean Water Act Section 303(d) list of impaired waterbodies submitted to the Environmental Protection Agency (EPA) every two years. It is incumbent upon the State and the EPA to work to restore waterbodies. Restoration is accomplished through the development and implementation of either a Total Maximum Daily Load (TMDL) document, a Waterbody Recovery Plan, or through the implementation of permits or other controls. These plans or permits identify the source of the pollutant and the amount of pollutants that can be introduced to the waterbody while still allowing overall recovery to proceed. With this knowledge, parties who discharge pollutants are given an "allowance," or "total maximum daily load" for that pollutant, and/or prescriptive actions called Best Management Practices (BMPs) that they must follow, to stay within that allowance.

The first step toward the recovery of an impaired waterbody is the development of the TMDL or Waterbody Recovery Plan. The EPA is required, by court order, to complete at least two of these documents in Alaska, each year. TMDLs and Waterbody Recovery Plans developed by DEC, either directly through staff work or indirectly through contract or grant efforts, are approved by the EPA and can be applied to this legal requirement. The EPA may also initiate work on TMDLs or Waterbody Recovery Plans directly, with their staff or contracted efforts.

DEC strongly supports the development and implementation of these plans and has committed to completing a minimum of two per year. Implementation is proceeding on all impaired waters.



Target #2: Ten active restoration projects per year. **Measure #2:** Number of active restoration projects during the year.

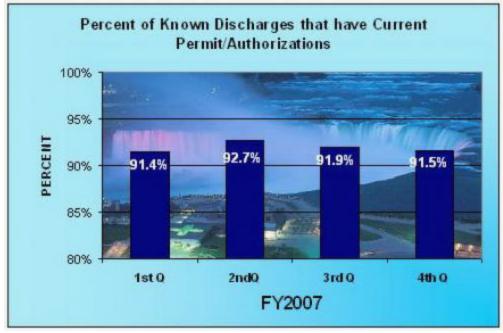
Analysis of results and challenges: Polluted or "impaired" waterbodies are identified in the biennial "Integrated Report" submitted by DEC to the Environmental Protection Agency. The target for restoration of these waterbodies is at least 10 active restoration projects per year.

Restoration projects may be conducted by grantees who have received funds through the Alaska's Clean Water Actions (ACWA) grant program, by contractors, by other State agencies, or by DEC personnel.

Reporting began during the 3rd quarter of FY2004. Data will be reported annually at the end of each fiscal year. At the end of FY2005, 18 restoration projects were ongoing, in FY2006, 22 restoration projects were ongoing and at the end of FY2007, 21 restoration projects were ongoing on impaired waterbodies.

A4: Strategy - Issue discharge permits/authorizations.

Target #1: 100% of known dischargers have current permits/authorizations. **Measure #1:** % of known dischargers have current permits/authorizations.



Analysis of results and challenges: The Wastewater Discharge Permit program issues three kinds of wastewater discharge approvals:

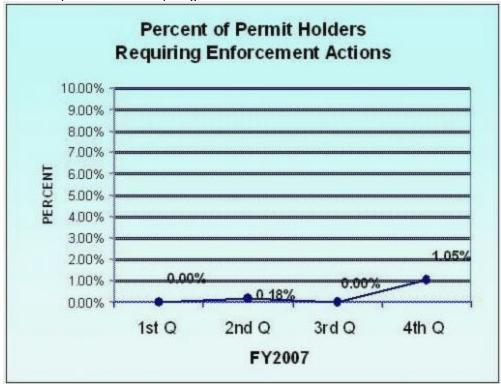
- 1) State individual permits and authorizations under 18 AAC 72
- 2) State permits and plan approvals of on-site disposal (septic systems) under 18 AAC 72
- 3) Certification that EPA-issued NPDES and Army Corps of Engineers wetland permits meet state water quality standards under 18 AAC 70.

A major tool for tracking and keeping permits current is the new permit database developed in anticipation of NPDES primacy. Achieving the 100% target will be improved with automatic notification of renewals built into the system.

For more information on the Wastewater Discharge Permits program, go to: http://www.dec.state.ak.us/water/wwdp/index.htm

A5: Strategy - Enforce compliance with permit/authorization conditions.

Target #1: Dischargers requiring permits are compliant with permit/authorization terms and conditions. **Measure #1:** % of permit holders requiring enforcement actions.



Analysis of results and challenges: DEC can and does enforce wastewater and water quality regulations as follows:

- For failure to obtain a permit for a discharge to surface or ground water for activities requiring a permit;
- For failure to meet end-of-pipe limits or for exceeding water quality standards in the receiving water;
- For failure to comply with other permit requirements such as reporting monitoring results.

Ideally the performance measure should be 0%. Failure to obtain a permit is a clear violation while a case must be built for enforcement based on complaints, inspections, or failure to comply with a permit condition. While DEC gives compliance assistance, enforcement actions are occasionally necessary. In FY07, several DEC inspections were used to build cases for non-compliance that resulted in a EPA enforcement actions with monetary penalties.

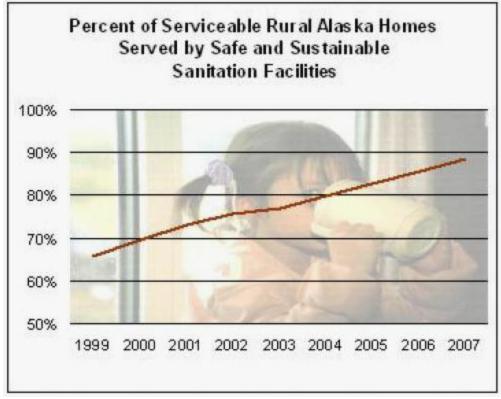
A major tool for tracking compliance is the new permit database developed in anticipation of NPDES primacy. Electronic storage and tracking of monitoring results and reports will enable DEC to see trends in compliance for individuals and industry sectors. A new enforcement and compliance unit is planned under state NPDES primacy.

The fourth quarter increase reflects cruise vessels under a compliance order that will be covered by a new general permit now in development.

For more information on DEC's wastewater program, go to: http://www.dec.state.ak.us/water/wwdp/index.htm

B: Result - Citizens are protected from unsafe sanitation facilities.

Target #1: 100% serviceable rural Alaska homes are served by safe and sustainable sanitation facilities. **Measure #1:** % of serviceable rural Alaska homes served by safe and sustainable sanitation facilities.

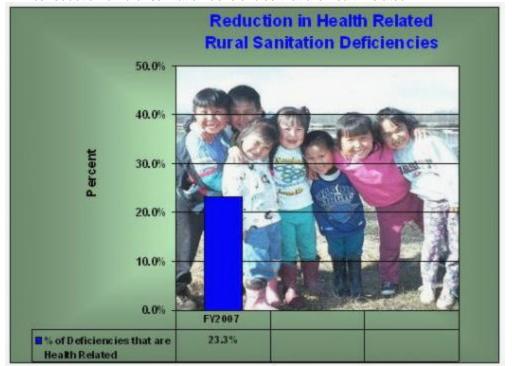


Analysis of results and challenges: Rural Alaska is characterized by over 280 isolated villages scattered across an area more than twice the size of Texas. The residents in many of these communities lack drinking water and wastewater infrastructure that is fundamental to protecting public health. The Village Safe Water program works to improve the health and safety of rural Alaskans by assisting communities to plan, design and construct safe and sustainable sanitation infrastructure.

Data to measure progress toward meeting the goal of all serviceable rural Alaska homes being served by safe and sustainable sanitation systems is collected on an annual basis. A serviceable home is defined as an existing home that is occupied year round and located in an area where piped, closed haul or individual septic tanks/wells are feasible. A sanitation system is defined as sustainable if the community managing it has the financial, technical and managerial capacity to properly operate and maintain it over a period which equals or exceeds the system's design life. For the last seven years, the percentage of rural Alaska homes served by adequate sanitation systems has increased by an average of 3% per year. Contingent upon the availability of funding being maintained at FY2006 levels, the program's goal continues to be an average increase of 3% per year.

B1: Strategy - Allocate funding based on health related needs.

Target #1: 2.5% annual reduction in rural sanitation deficiencies that are health related. **Measure #1:** % reduction of rural sanitation deficiencies that are health related.



Analysis of results and challenges: The cost of addressing rural sanitation needs far exceeds available resources making it necessary to prioritize funding requests. Grants made available through the Village Safe Water (VSW) program are allocated based principally on a five tier ranking system that considers the relative beneficial impacts of proposed projects. The first two tiers are homes currently not served (Tier 1) and projects which will bring community drinking water supplies into compliance with public health standards (Tier 2). Since VSW's primary goal is to address sanitation deficiencies that are causing or are likely to cause public health problems, Tier 1 and 2 projects are VSW's top priority. Essential upgrades, beneficial upgrades and desired upgrades (Tiers 3, 4, and 5) are not considered health related and are not measured as a part of this strategy.

Progress in reducing sanitation deficiencies that could effect public health is quantified by the estimated cost of addressing such needs as compared to the cost of addressing all sanitation deficiencies. In FY07 (baseline year), 23% of rural Alaska sanitation needs were health related. Data related to deficiencies will be collected on an ongoing basis throughout the year and cost estimates for addressing these needs will be updated annually. The VSW program's target is to reduce sanitation needs that are health related by an average of 2.5% per year.

B2: Strategy - Increase operator certification compliance.

Target #1: 2% annual increase in the number of rural sanitation systems which comply with water treatment operator certification requirements.

Measure #1: % annual increase in the number of rural sanitation systems which comply with water treatment operator certification requirements.



Analysis of results and challenges: Water treatment operators are responsible for safeguarding public health. Certification validates they have the qualifications necessary to meet this responsibility. The State's Operator Certification (OC) program classifies water systems based on their size and complexity and determines whether operators have experience and knowledge commensurate with their system's classification. In order to assist operators achieve certification, the OC program offers training and administers examinations.

Although the OC program oversees certification in water treatment, water distribution, wastewater treatment and wastewater collection, this measure is limited to water treatment certification as it is regarded as the most directly related to public health. This measure excludes communities with less than 25 residents or communities where residents obtain water on a house by house basis (private wells or rain catchments for example) since these communities are not subject to operator certification requirements.

Progress is increasing. Operator certification compliance is quantified by the number of rural sanitation systems meeting certification requirements as compared to the total number of rural sanitation systems subject to certification requirements. In FY07 (baseline year) 57% of rural sanitation systems subject to certification requirements were in compliance with such requirements. The OC program's target is to increase the number of systems in compliance by an average of 2% per year.

Key RDU Challenges

The department is continuing to review its water quality programs for the purpose of establishing rational and seamless protective measures for all of Alaska's surface and groundwater. The review critically assesses the structure of DEC water programs and the use of permitting, facility inspections, enforcement, and best management practices to assure that pollution risks are appropriately and efficiently mitigated.

As an outgrowth of this review, the 2005 Legislature authorized DEC to seek and assume primacy for the federal wastewater discharges permitting program, National Pollutant Discharge Elimination System (NPDES). The state program will be the Alaska Pollutant Discharge Elimination System (APDES) program. This also includes the

responsibility to field a fully staffed Compliance and Enforcement Program to ensure that permitted facilities are complying with the terms and conditions of their permits.

Periodic scientific review and adoption of new or revised water quality standards is necessary to ensure they remain protective of the many uses of Alaska Waters. In FY2009, the department will set a schedule for achieving state priorities identified in FY2008 and begin implementation of a new three-year workplan for amendments and revisions to the water quality standards.

Many sources of water pollution are effectively regulated and controlled through permits. The largest remaining source of water pollution is from non-point sources that are not controlled through permits. This offers the challenge of affecting positive human behavior changes through education, land use controls, regulations and best management practices so that water quality is maintained or restored.

Significant Changes in Results to be Delivered in FY2009

In December of 2006, statutory changes resulting from a citizen's ballot initiative required DEC to develop and maintain a new permit program for Large Commercial Passenger Vessels ("cruise ships") and to develop an on-board Ocean Ranger program. During the 2007 cruise ship season, DEC implemented a transitional program involving on-board vessel observations by a combination of environmental professionals and U.S. Coast Guard licensed marine engineers. For the 2008 cruise ship season, a contract will be in place to implement an Ocean Ranger program that is commensurate with the level of funding provided by the initiative. A new wastewater discharge general permit will also be in place as required by the initiative.

Major RDU Accomplishments in 2007

WASTEWATER DISCHARGE PROGRAM

For EPA-issued NPDES Permits with discharge to fresh and marine waters of the state, DEC issued:

- 1 Clean Water Act (CWA) section 401 certification for 100% of EPA-issued NPDES individual permits.
- 7 authorizations under the Trans Alaska Pipeline System (TAPS) linewide NPDES general permit.
- 16 authorizations under the NPDES Placer Mining general permit.
- 5 authorizations under the NPDES North Slope Oil /Gas general permit.
- 1 authorization under the NPDES General Seafood Processors general permit.
- 29 authorizations under the NPDES Small Domestic wastewater general permit.

Where EPA has not issued NPDES permits (either because it was not scheduled by the EPA or the discharge was to land or groundwater), DEC issued State wastewater disposal permits:

- 15 state individual permits.
- 55 state general permit authorizations.
- 812 engineered wastewater plan reviews (including waivers) were conducted on projects state-wide.

DEC inspected:

- 66 NPDES-permitted facilities.
- 21 NPDES-permitted stormwater sites.
- 43 state-permitted facilities.
- 28 non-permitted wastewater facilities.
- 11 non-permitted stormwater construction sites.
- 9 citizens' complaints.

Other key accomplishments include:

As part of capacity building for APDES primacy, one EPA Region 8 staff and 2 state (Wisconsin and Minnesota)
permitting and inspection staff have assisted the Department with inspections, permit writers guidance, forms, and
the APDES application to the EPA.

 Department staff were able to join Washington State and EPA Region 10 inspectors in Washington, Idaho and Alaska to increase compliance and enforcement capacity. These work share agreements helped DEC staff to develop our inspection protocols and forms.

NON POINT SOURCE PROGRAM

- Reviewed 118 stormwater pollution prevention plans ensuring protection of surface water bodies during facility
 construction; reviewed 59 facility engineering plans for compliance with stormwater requirements; reviewed 292 US
 Army Corps of Engineer Preconstruction Notices; issued 133 state stormwater certifications; issued 160 water
 quality certifications of U.S. Army Corps of Engineers permits for dredge and fill projects.
- Reviewed 31 detailed plan of operations for forestry activities on private lands.
- Completed 2 TMDLs (Total Maximum Daily Load plans; also known as waterbody recovery plans) Ward Cove and Thorne Bay.
- Provided 15 grants to communities and other organizations to assist with priority water quality monitoring, watershed planning, and recovery of polluted waters.
- Updated the Non-Point Source Water Pollution Control Strategy, a statewide plan for protecting Alaska's natural resources from polluted runoff also known as nonpoint pollution.

WATER QUALITY ASSESSMENT AND MONITORING PROGRAM

- Adopted changes to natural condition-based Water Quality Standards.
- Gathered public input and set priorities for improving and updating Water Quality standards for the next 3-year workplan.
- Implemented a shared resource agency (DEC, DFG & DNR) online waterbody nomination and ranking system to help target limited resources towards the State's highest waterbody priorities.
- Provided grants to 4 communities to monitor water quality at beaches to protect against pathogen contamination as required under the federal Beach Act.
- Implemented a Water Education Strategy for advancing improvements to water quality by presenting pollution prevention strategies at local and statewide events such as Outdoor Days, Alaska Municipal League Conference, Ocean's Festival and the Alaska Forum on the Environment.
- Completed field work for the Aleutian Islands Environmental Monitoring & Assessment Program (EMAP) survey for water quality, sediment contamination and biological status.
- Completed the final report on Interior Alaska wadeable streams EMAP survey for water quality, sediment contamination and biological status.
- Collected nutrient data from 21 lakes in the Cook Inlet basin to support development of regional nutrient criteria.
- Updated the Water Quality Management Plan to cover all water quality information collected and information management for the Water Division. The EPA conducted a Quality Systems Review and found no significant problems with Water Division practices.

VILLAGE SAFE WATER PROGRAM

- Secured \$63.4 million in federal Environmental Protection Agency and US Department of Agriculture-Rural Development capital grant funding for rural sanitation improvements.
- Awarded \$109.8 million in grants for 92 water, wastewater and solid waste projects to small communities.

Contact Information

Contact: Lynn Kent, Director Phone: (907) 269-6281 Fax: (907) 269-7508

E-mail: Lynn.Kent@alaska.gov

Water RDU Financial Summary by Component												
											All dollars show	n in thousands
	FY2007 Actuals				FY2008 Management Plan				FY2009 Governor			
	General Funds	Federal Funds	Other Funds	Total Funds	General Funds	Federal Funds	Other Funds	Total Funds	General Funds	Federal Funds	Other Funds	Total Funds
Formula Expenditures None.												
Non-Formula Expenditures Water Quality	5,072.9	3,842.7	1,132.6	10,048.2	5,595.8	4,843.7	2,159.9	12,599.4	5,819.4	4,907.0	4,783.0	15 500 4
Facility Construction	1,373.6	2,283.9	2,031.3	5,688.8	1,082.0	2,593.7	3,248.7	6,924.4	1,086.3	2,621.7	3,372.1	15,509.4 7,080.1
Totals	6,446.5	6,126.6	3,163.9	15,737.0	6,677.8	7,437.4	5,408.6	19,523.8	6,905.7	7,528.7	8,155.1	22,589.5

Water Summary of RDU Budget Changes by Component From FY2008 Management Plan to FY2009 Governor All dollars shown in thousands

	General Funds	Federal Funds	Other Funds	Total Funds
FY2008 Management Plan	6,677.8	7,437.4	5,408.6	19,523.8
Adjustments which will continue current level of service:				
-Water Quality	223.6	63.3	23.1	310.0
-Facility Construction	4.3	28.0	123.4	155.7
Proposed budget increases:				
-Water Quality	0.0	0.0	2,600.0	2,600.0
FY2009 Governor	6,905.7	7,528.7	8,155.1	22,589.5